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POLARIS

An examination of pertinent NSC Actions back to June 1957 does not disclose any Action indicating Council approval of increased numbers of POLARIS missiles based upon the achievement of a break through of any kind.

The Deputy Executive Secretary's notes indicate the following statements at Council meetings:



July 3, 1957:- Deputy Secretary Quarles referred to the development of POLARIS as "far in the future."

December 6, 1958: Admiral Burke admitted that POLARIS was chancy at the outset. Now, however, we know that we can get a warhead for the missile. We also know that we have the re-entry problem licked. Moreover, the guidance tests have been satisfactory, and the propellant is all right. Therefore, what we have now in sight and are pretty sure of obtaining is a POLARIS missile with a 1200 mile range which can be fired from a submarine while submerged which will carry a warhead and with a CEP of four miles which can probably be reduced to two. What we must try to do in the immediate future is to get a missile with a 1500 mile range, carrying a warhead of and cut the CEP two miles or less. Mr. Holaday in general confirmed Admiral Burke's figures.

August 18, 1959: Mr. Stans stated that he had recently had a two and a half hour briefing on POLARIS, in which he had been informed that the eventual objective of the POLARIS program was 45 submarines, with 29 deployed at all times. With such a force, he was informed, we could destroy 232 targets, which was sufficient to destroy all of Russia. The total cost of such a program would be 7 to 8 billion dollars, and annual operating costs would be \$350 million. An obvious question was suggested by this briefing — if POLARIS could do this job, why did we need other IRBMs or ICBMs, SAC aircraft, and overseas bases? The answer he had received when he asked this question was that that was someone else's problem.

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DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON 25, D. C.

COMMAND FILE
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11 April 1960

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To: Flag and General Officers

Subj: Dope

POLARIS SYSTEM SPEEDUP

Our original confidence in the soundness of POLARIS has been substantiated by the excellent results of the test program.

Thirty full scale test missiles have been flown. Four fully guided flights using the designed fire control system have averaged a miss distance of less than half a nautical mile and demonstrated the ruggedness and reliability of the guidance unit (hold this closely, no releases of this to the news media). The nuclear device of the warhead and the reentry body have been proven. The navigation system for the submarine has demonstrated repeatedly its ability to maintain a position accuracy within 1/8 of a mile although the established system requirement is only 1/4 mile. Over 60 pop-up tests and dummy firings from the GEORGE WASHINGTON's tubes assure the mechanical feasibility of submarine launching of the missile.

These successes have been the basis of Navy recommendations for acceleration and augmentation of the POLARIS program. They won the approval of the acceleration program which you read about in the papers.

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About 52 million dollars will be needed in FY 60 and FY 61 to finance this program. Sixteen million dollars will be used to advance the completion dates of the last seven of the first nine approved submarines. The remainder would be used for the acceleration of missile and missile component production. Deployment dates for FBM's must be met.

Ship construction is the only FY 60 program that will be affected by this acceleration. It will be \$8 million short and require cost adjustment or ship cancellations later.

Improvement of the United States deterrent retaliatory posture, during the greatest danger period, can be obtained by getting more FBM submarines to sea earlier. Navy requested \$952M in the FY 61 budget to build 3 POLARIS submarines in FY 61 and to procure long lead time items for 3 more in FY 62. On 8 March SecNav recommended to SecDef that the POLARIS program be augmented.

The recommendation contained two alternative proposals, either augment by 6 SSB(N)s or augment by 3 SSB(N)s. Increased procurement of long lead time items in FY 61 for 9, 6 or 3 FY 62 SSB(N)s was also recommended. Another recommendation would provide POLARIS missiles in surface ships. Guided missile cruisers under construction or conversion could carry 8 missiles each, heavy cruisers could be outfitted for 16 missiles each and Q ships converted from Victory ships could each carry 24 missiles.

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The augmentation program as approved consists of the original 3 SSB(N)s to be constructed in FY 1961 and long lead time procurement for 6 additional, or a total of 9 FY 1962 submarines. These additional long lead time procurements will be provided for by re-programming 2 SSN new construction out of the three SSN's in the '61 program. If tests progress as we hope they will we will ask for a supplemental appropriation for additional augmentation in January.

All of these schemes involve increased costs and increases of men to operate Navy ships and systems. We must get our personnel strengths up to where they belong, 619,000, and keep them there.

Many people outside of the Navy are strong supporters of this system and some oppose it.

Don't let any claims that might be made for other systems obscure the facts. Set any detractors straight on such statements as these:--
(Unclassified from here to end of this article).

1. Detractor -- ^{UNCLASSIFIED} The Navy claims POLARIS is a 1200 mile missile, yet firings to date are only 800 miles.

Fact -- The first few firings of test vehicles were at ranges of about 800 miles. These test vehicles in the development program require the use of heavy instrumentation. These instrumented test firings have been aimed at achieving a range of over 900 miles. The first tactical missile to go to sea will have a range of 1200 miles.

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2. Detractor -- The POLARIS Circular Error Probable or C.E.P. is very large, much more so than, land based ICBM's.

Fact - The POLARIS C.E.P. is as good as or better than any known missile today.

3. Detractor -- An ICBM in an underground "hardened" site is just as invulnerable as POLARIS.

Fact - Hardening of our missile sites is only feasible and reasonably effective against missiles of low accuracy and low yields. It is impossible to harden against a direct hit having the force of an atomic warhead. With the improvements in accuracy that appear imminent, the benefits of hardening are even more seriously degraded. Any site with a fixed address is more vulnerable to ballistic missiles than a mobile site. Civil defense experts have said that hardening the continental deterrent sites increases Civil Defense problems. Hardening is not practical as a means of protecting airbases and bombers.

4. Detractor -- The POLARIS submarine is very noisy and Russia will be able to keep them under surveillance at all times with their own submarines.

Fact - False. At the slow speeds which the FBM submarine will use on patrol, it is no noisier than conventional submarines. If the tracking were done by a conventional submarine, use of high speeds

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by the nuclear FBM submarine would allow him to escape easily. Where can the Soviets install ocean tracking stations? There are no such places. At any time with many submarines at sea, which one is the FBM?

5. Detractor -- Even if the POLARIS did have a small C.E.P., the submarine's navigational error is very large.

Fact - FBM submarines will have the inertial navigation system installed. This system has already proven its accuracy as shown by the Polar transits of the nuclear submarines. The advent of the "TRANSIT" navigational satellite system will even improve the Navy's already excellent results.

6. Detractor -- It is farcical to put POLARIS on surface ships since it couldn't be fired while the ship is rolling.

Fact - False. The Navy has been firing from rolling platforms for years. This is no new problem. They can be fired regardless of ship's rolling. They have been fired from OBSERVATION ISLAND and a ship's motion simulator. Submerged submarines have little or no roll.

7. Detractor -- Solid propellant missiles mounted on moving freight cars will be a much better system than POLARIS.

Fact - Certainly any missile capable of being moved is less vulnerable than any fixed launching site. However, freight car missiles will be subject to both espionage and sabotage and can be fired only when

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pre-computed and specific locations are reached and after a considerable settling down period. Tracks can be destroyed. The POLARIS system will have continuously mobile and hidden missiles that can be fired at any time.

8. Detractor -- POLARIS submarines are unable to communicate while submerged.

False. Present techniques and installed equipment today allow us to communicate with a submerged submarine in any foreseeable launching area, including under the Polar ice.

9. Detractor -- POLARIS submarines have no defense and will be easy targets for enemy submarines once detected.

Fact - POLARIS has detection equipment and ASW torpedoes for protection just like any other submarine and other U.S. submarines will be operating in the same areas.

10. Detractor -- Even if POLARIS is a 1200 mile system, it will be unable to reach many important targets in Russia.

Fact - A glance at a globe and a brief map exercise will show that the majority of potential targets, which are concentrated in Western Russia, can be reached by a 1200 mile missile.

11. Detractor -- Only about one-third of the POLARIS submarines can be kept on station. The remainder will be vulnerable in port.

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Fact - By the use of two crews for each submarine, we will be able to keep better than 50 percent of these submarines at sea. In an emergency, all submarines in port, except those in major overhaul, could immediately put to sea.

12. Detractor -- The POLARIS missile will require much maintenance and won't always be ready at sea.

Fact - A solid propellant missile requires infinitely less maintenance than a liquid propelled missile. Maintenance of POLARIS can be accomplished by forces afloat. It is anticipated that the shelf life of this missile will be measured in years.

13. Detractor -- POLARIS is such a small missile its warhead doesn't carry much power.

Fact - The firing power of one POLARIS submarine is greater than all the bombs dropped in World War II including Hiroshima and Nagasaki.

14. Detractor -- The operating area available to POLARIS submarines, with its missiles only having a 1200 mile range are so small that enemy ASW submarines will easily be able to locate and destroy them.

Fact - Our own experience has shown that to find a nuclear submarine that is attempting to avoid detection is an extremely difficult task. Our FBM submarines will have a possible launching area several

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times the size of the United States. Later, longer range missiles will more than double this area. The nature of their mission dictates that they remain undetected rather than conducting normal submarine attack operations which give away the submarine location. Other submarines will be operating in the same areas. How will the enemy know which one is the FBM submarine?

The Navy's total strength is measured by the cooperation that exists within it. Right now every one seems to be backing the CVA and POLARIS. This is good. Perhaps others will see our needs and assign more than 28% of the defense budget to the Navy.